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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,770	12/24/2003	Makoto Shiomi	12480-000028/US	9457

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EXAMINER	
DINH, DUC Q	

ART UNIT	PAPER NUMBER
2629	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/743,770	SHIOMI ET AL.	
	Examiner	Art Unit	
	DUC Q. DINH	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,9,10,19,20,23,24,27-32,35,36 and 41-59* is/are rejected.

7)☒ Claim(s) *3-9,12-18,21,22,33,34,37 and 38* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/24/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 27-30, 43 and 50,53 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

When nonfunctional descriptive material is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored in a computer-readable medium, in a computer, on an electromagnetic carrier signal does not make it statutory. See Diehr, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in Benson were unpatentable as abstract ideas because "[t]he sole practical application of the algorithm was in connection with the programming of general purpose computer."). Such a result would exalt form over substance. In re Sarkar, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978) ("[E]ach invention must be evaluated as claimed; yet semantogenic considerations preclude a determination based solely on words appearing in the claims. In the final analysis under § 101, the claimed invention, as a whole, must be evaluated for what it is.") quoted with approval in Abele, 684 F.2d at 907, 214 USPQ at 687). See also In re Johnson, 589 F.2d 1070, 1077, 200 USPQ 199, 206 (CCPA 1978) ("form of the claim often an exercise in drafting"). Thus, nonstatutory music is not a computer component and it does not become statutory by merely recording it on a compact disk. Protection for this type of work is provided under the copyright law.

Claim Objections

2. Claims 12 is objected to because of the following informalities: "further comprising:" should read "wherein the second correction comprising:" for consistency with the specification and Fig. 1 which describes the components of the second correction section 33.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 10-11, 19-20, 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Naito et al. (U.S Patent No 6,704,008), hereinafter Naito.

In reference to claims 1 and 10 and 23, Naito discloses a display in Fig. 1, comprising:

a first correction section (120), adapted to correct a grayscale level of at least one pixel (P2; Fig. 2) to facilitate a transition from a current grayscale level to a desired grayscale level; (Fig. 1, col. 4, lines 13-25) and

a second correction section (130), adapted to reduce high frequency components (reduce of red components of the corrected pixel P2) in a spatial domain of the corrected at least one pixel (col. 4,lines 53-57).

In reference to claims 2 and 11, 24, Naito discloses second correction is adapted to reduce an unacceptable peak in spatial domain form the corrected at least one pixel (DSg is a signal of unacceptable between the grey scale of the R component between pixel P2 and P1; see Fig. 2 and associated text in col. 4-6).

In reference to claims 19 and 20, Naito discloses that the display is a liquid crystal display (150) and the at least one pixel includes at least one liquid crystal element of a liquid crystal display of a normally black, vertical align mode (in Fig. 1).

In reference to claims 35, 36, 49, 50, 51, Naito discloses a grayscale level is increased from a desired grayscale level to facilitate a transition from a current grayscale (R=40 in Fig. 2) level to a desired grayscale level (increase +10 for R of P2).

In reference to claims 39, 42, 46, 47, Naito discloses at least one pixel P1 is spatial filtering corrected by the circuit 130 as shown in Fig. 3.

In reference to claims 48, 58 Naito discloses means for correcting including overshoot the driving of the display, i.e. providing the driving of the display with corrected signal.

In reference to claims 40, 41, 49, Naito discloses means for correcting (120) is for increasing a gray scale level of at least one pixel to facilitate a transaction from a current level (R=40) to a desired grayscale level (R=5) as shown in Fig. 3.

In reference to claims 50, 52 and 59, Naito discloses determining a signal for driving at least one pixel to produce a desired grayscale level from a current grayscale level (using circuit 12); and spatial filtering the at least one pixel (using circuit 130, see above rejection).

In reference to claims 31-32, 44-45 and 52-55, Naito discloses a circuit diagram comprising computer readable medium and program to perform the image processing as claimed.

In reference to claims 56-57, refer to the rejection of claims 50 and 52.

5. Claims 1-2, 10-11, 19-20, 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawanabe et al. (U.S Patent No. 7,158,107), hereinafter Kawanabe.

In reference to claims 1 and 10 and 23, Kawanabe discloses a display in Fig. 1, comprising:

a first correction section (103), adapted to correct a grayscale level of at least one pixel (at least one pixel of the current frame N-th frame; see col. 2, lines 7-12) to facilitate a transition from a current grayscale level to a desired grayscale level; (see Figs 3-4 and also Figs. 18-22) and

a second correction section (104), adapted to reduce high frequency components (grayscale differences) in a spatial domain of the corrected at least one pixel (Figs 3-4 and associated text).

In reference to claims 2 and 11, 24, Kawanabe discloses second correction is adapted to reduce an unacceptable peak in spatial domain form the corrected at least one pixel ( ).

In reference to claims 19 and 20, Kawanabe discloses that the display is a liquid crystal display (150) and the at least one pixel includes at least one liquid crystal element of a liquid crystal display of a normally black, vertical align mode (col. 6, lines 20-35).

In reference to claims 48, 58 Kawanabe discloses means for correcting including overshoot the driving of the display, i.e. providing the driving of the display with corrected signal (col. 5, lines 60-65).

In reference to claims 31-32 and 52-55, Kawanabe discloses a circuit diagram comprising computer readable medium and program to perform the image processing as claimed (see Figs 1-2, 18-22).

Allowable Subject Matter

6. Claims 3-9, 12-22, 25-26, 33-34, 37-38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

None of the cited arts teaches or suggest:

calculating a first mean of corrected grayscale levels of a first group of pixels in proximity to the at least one corrected pixel;

3calculating a second mean of corrected grayscale levels of a second group of pixels in proximity to a corrected pixel determined to have an unacceptable grayscale level, upon the first mean differing from a grayscale level of the corrected pixel by more than a threshold value; and

changing the unacceptable grayscale level to a grayscale level equal to the second mean (claims 3, 12, 25).

calculating a first mean of corrected grayscale levels of a first group of pixels in proximity to the at least one corrected pixel; calculating a second mean of corrected grayscale levels of a second group of pixels in proximity to a corrected pixel determined to have an unacceptable grayscale level, upon the first mean differing from a grayscale level of the

corrected pixel by more than a threshold value; and changing the unacceptable grayscale level to a grayscale level equal to the second mean (claims 6, 15, 26).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUC Q. DINH whose telephone number is (571) 272-7686. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD HJERPE can be reached on (571)272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DUC Q DINH
Examiner
Art Unit 2629